

Original

6-19-03

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Atty. Dkt. No. DIVA/246DIV1

IN THE SPECIFICATION:

Please replace the following paragraphs.

Beginning at page 1, line 11:

This application is also a continuation-in-part of U.S. Patent Application serial number 09/384,394 filed August 27, 1999, entitled "Method and Apparatus for Compressing Video Sequences," which is hereby incorporated herein by reference in its entirety.

Beginning at page 7, line 7:

The invention produces the IPG using a compositing technique that is described in commonly assigned US patent application serial numbers 09/201,528 filed November 30, 1998 and 09/359,561 filed July 23, 22, 1999 (attny dockets 168 and 168 CIP1), which are hereby incorporated by reference herein. The compositing technique, which will not be discussed further herein, enables full motion video to be positioned within an IPG and have the video seamlessly transition from one IPG page to another. The composited IPG pages (i.e., a plurality of video frame sequences) are coupled from a video source 114 to an encoding and multiplexing unit 116 of the present invention. Audio signals associated with the video sequences are supplied by an audio source 112 to the encoding and multiplexing unit 116.

Beginning at page 11, line 1:

At step 320, the accepted data is coupled to the I-picture output of the picture isolator. In the case of picture Isolators 230-2 through 230-10, since there is no PB output shown, the accepted data (i.e., the sequence header, I-picture start code and I-picture) is coupled to a sole output. The method ~~400~~ 300 then proceeds to step 325.

Beginning at page 11, line 11:

At step 330, the second picture start code and all data in a GOP until the next group start code is accepted. The method ~~400~~ 300 then proceeds to step 335.

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Beginning at page 16, line 1:

In the exemplary embodiment of Figure 5, the remote control unit 580 comprises an 8-position joy stick, a numeric pad, a "select" key, a "freeze" key and a "return" key. User manipulations of the joy stick or keys of the remote control device are transmitted to a controller via an infra red (IR) link. The controller 570 is responsive to such user manipulations and executes related user interaction routines 500, uses particular overlays that are available in an overlay storage 577 ~~376~~.

Beginning at page 20, line 21:

To illustrate the applicability of the invention to encoding IPG sequences, Figures 9 and 10 depict a frame from two different sequences of IPG pages 900 and 1000. The common information is everything except the programming grid 902 and 1002. The non-common information is the programming grid 902 and 1002. The programming grid 902 and 1002 changes from sequence 900 to sequence 1000. This grid changes for each channel group and each time interval. The IPG display 900 of Figure 9 comprises a first 905A, second 905B and third 905C time slot objects, a plurality of channel content objects 910-1 through 910-8, a pair of channel indicator icons 941A, 941B, a video barker 920 (and associated audio barker), a cable system or provider logo 915, a program description region 950, a day of the week identification object 931, a time of day object 939, a next time slot icon 934, a temporal increment/decrement object 932, a "favorites" filter object 935, a "movies" filter object 936, a "kids" (i.e., juvenile) programming filter icon 937, a "sports" programming filter object 938 and a VOD programming icon 933. It should be noted that the day of the week object 931 and next time slot icon 934 may comprise independent objects (as depicted in Figure 9) or may be considered together as parts of a combined object. Details regarding the operation of the IPG pages, their interaction with one another and with a user are described in commonly assigned US patent application 359,560 filed July 23, 22, 1999 (attorney docket no. 070 CIP2) which is hereby incorporated herein by reference.

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Beginning at page 26, line 3:

Details regarding the operation of the IPG page of Figure 9, the interaction of this page with other pages and with a user are described in commonly assigned US patent application 359,560 filed July 22, 1999 (attorney docket no. 070 CIP2) which is hereby incorporated herein by reference.

Beginning at page 27, line 8:

To assist a subscriber (or other viewer) in selecting programming, the HEE 1302 produces information that can be assembled to create an IPG such as that shown in FIG. 1. The HEE produces the components of the IPG as bitstreams that are compressed for transmission in accordance with the present invention.

Beginning at page 29, line 33:

The graphics portion of the IPG is separately encoded in the graphics processor 1402. The processor 1402 is supplied guide data from the guide data source (1332 in Figure 13 2). Illustratively, the guide data is in a conventional database format containing program title, presentation date, presentation time, program descriptive information and the like. The guide data grid generator 1414 444 formats the guide data into a "grid", e.g., having a vertical axis of program sources and a horizontal axis of time increments. One specific embodiment of the guide grid is depicted and discussed in detail above with respect to Figure 9.

Beginning at page 29, line 33:

FIG. 15 depicts a block diagram of the LNE 1328. The LNE 1328 comprises a cable modem 1500, slice combiner 1502, a multiplexer 504 and a digital video modulator 1506. The LNE 1328 is coupled illustratively via the cable modem to the HEE 1302 and receives a transport stream containing the encoded video information and the encoded guide data grid information. The cable modem 1500 demodulates the signal from the HEE 1302 and extracts the MPEG slice information from the received signal. The slice combiner 1502 combines the received video slices with the guide data slices in the order in which the decoder at receiver side can easily decode without

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further slice re-organization. The resultant combined slices are PID assigned and formed into an illustratively MPEG compliant transport stream(s) by multiplexer 1504. The slice-combiner (scanner) and multiplexer operation is discussed in detail with respect to Figures 15-20. The transport stream is transmitted via a digital video modulator 1506 506 to the distribution network 1304.

Beginning at page 31, line 12:

Figure 16 illustrates a matrix representation 1600 of a series of IPG pages. In the illustrated example, ten different IPG pages are available at any one time period, e.g., t1, t2, and so on. Each page is represented by a guide portion (g) and a common video portion (v) such that a first IPG page is represented by g1/v1, the second IPG page is represented by g2/v1 and so on. In the illustrative matrix 1600 600, ten identical guide portions (g1-g10) are associated with a first video portion (v1). Each portion is slice-base encoded as described above within the encoding unit (1316 of FIG.14).